

in Indiana, were found along the damp, sandy or muddy margins of small streams, in company with *Galgulus oculatus*, a common Hemipteron, which abounds in like situations. *Cucullatus*, when disturbed, has a more prolonged flight than any other of our *Tettiginae*.

The life-history of the "grouse locusts" is, as yet, very imperfectly known. In the proper localities mature specimens of most of the six species so far noted in Indiana can be taken almost any day in the year. *Tettix ornata*, Say, and *Tettigidea polymorpha*, Burm, were found in copulation on April 18th, and the latter species again on May 31st; while, as noted above, the half-grown young of two species were collected on April 1st.

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No. 18, *Pezotettix viridipes?* Walsh, Mss., of my first paper, is *Pezotettix viridulus*, Walsh, as I have since determined by comparison with specimens of the latter taken by Prof. McNeill at Moline, Ill. It was the third full-grown species, other than *Tettiginae* taken last season, having been preceded by *Chortophaga viridifasciata*, De Geer, Apr. 26th, and *Arphia sulphureus*, Fab., May 20th. Two mature males of *P. viridulus* were taken on May 30th, and others were found at intervals throughout June, but it is by no means a common species in this locality.

FURTHER NOTES ON GELECHIA GALLÆDIPLOPAPPI, AND DESCRIPTION OF A NEW SPECIES OF BRACON.

BY REV. THOMAS W. FYLES, SOUTH QUEBEC.

In a paper entitled "A Day in the Woods," I brought under the notice of the Entomological Society of Ontario, at its annual meeting held in London, on the 27th of August, 1890, the galls formed by *G. gallædiplopappi*, and gave an account of the chrysalis and perfect insect. I also alluded to two kinds of parasites preying upon the species. The description of the moth was reproduced in the December number of the CANADIAN ENTOMOLOGIST of that year (Vol. XXII., p. 248).

The insect has again come under my observation, and I am able to furnish these further particulars concerning it:—

The larva of the species when full grown is four lines in length. Its colour is light seal-brown, and it has a dorsal line of darker brown, and a few dark patches on the three last segments. Its head is black. There are a few bristles on the head and along the sides. It assumes the chrysalis form in the beginning of July.

The moths continue to appear from the 1st of August to the close of the month.

At least three kinds of parasites molest the species :—

1. *Pimpla pterelis*, Say, which, in August, issues in its perfect state from the chrysalis of the moth. (See 22nd Ann. Rep., Ent. Soc. of Ont., p. 18). This species was identified for me by Mr. Harrington.

2. An insect which, in its larval condition, leaves the chrysalis of the moth about the 10th of July. The larva is nearly four lines in length, and is white with a tinge of pink. It spins a white cocoon within the gall. I have two or three of the cocoons, and hope to obtain the perfect insects in due course.

3. A Bracon.—The larvæ of this, numbering from four to ten in a batch, consume the remains of their host at the end of July, and then spin their light drab cocoons in a cluster at the bottom of the gall. The flies appear about the 10th of April.

The perfect insect has the head and thorax black. The abdomen, which is somewhat spindle-shaped, and is attenuated at the junction with the thorax, is honey-yellow, with a brown patch on the upper part of each segment—in some instances the upper part of each segment is entirely suffused with brown. The mouth organs are honey-yellow, and the legs, with the exception of the tarsi of the hindmost pair, which are light brown, are of the same colour. The ovipositor of the female is longer than the abdomen. Its sheath is blunt, hairy and black at the tip, and does not divide in drying.

I cannot learn that this insect has hitherto been described or named. I would therefore suggest for it the appellation *Bracon furtivus*.

NOTES ON THE LIFE-HISTORY OF AGALLIA SANGUINOLENTA, PROV.*

BY HERBERT OSBORN AND H. A. GOSSARD, AMES, IOWA.

This leaf-hopper is considered a clover pest, but is also known to feed on beets, rutabagas, cabbages and blue grass. It is active even in midwinter on sunshiny days. The eggs are thrust beneath the epidermis of the food-plant, and the first brood of larvæ appears from the middle of May until July 1st. The earliest individuals of the brood are nearly mature by the first of July and are supposed to begin egg-laying a little later. Larvæ can be found in all stages of growth from this time until the advent of winter, but most of the individuals are believed to be included in two broods.